

## CANTED EASY AXIS IN SELF-PINNED LAYERS

### ABSTRACT

A magnetic head having a free layer and an antiparallel (AP) pinned layer structure spaced apart from the free layer, the AP pinned layer structure including at least two AP-pinned layers having magnetic moments that are self-pinned antiparallel to each other, the AP-pinned layers being separated by an AP coupling layer. An easy axis of a first or both of the AP-pinned layers is oriented at an angle of at least  $5^\circ$  from the ABS along a plane of the first AP-pinned layer.